An international comparative study on job mobility

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An International Comparative Study on Job Mobility

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Abstract. Job mobility refers to the movement of people between jobs with different employers. It is an important means of adjustment in the labour market because it facilitates structural changes in the economy. This paper presents the results of a comparative study on job mobility in 6 countries: France, Japan, the Netherlands, Sweden, United Kingdom and the USA.

Some of these countries use both labour force surveys and establishment surveys to gather information on job mobility, while other countries only use one of them. The paper uses information from both types of survey held in the seventies and the eighties and describes the developments and the structure of job mobility in the 6 countries. An empirical cross-country analysis shows that job mobility is positively correlated with the growth of employment and negatively correlated with the unemployment rate. There appear to be hardly any structural differences in job mobility between the USA, Sweden, France and the UK. Job mobility in the Netherlands is structurally lower than in the other countries, while job mobility in Japan is structurally lower than in the Netherlands.

1. Introduction

People have different motives for changing jobs. Job change may offer the individual a higher income, better working-conditions or a more stable contract [1]. At the macro-level job mobility is a means of adjustment

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in the labour market. With a high level of job mobility, declining industries can reduce employment without dismissals and expanding industries can attract new employees without huge recruitment cost. Job mobility facilitates structural changes in the economy and is therefore considered to be an indicator of labour market flexibility.

There are substantial differences in labour market performance between European countries. Unemployment is high in, for example, the UK, France and the Netherlands and low in Sweden. One of the causes of these differences may be differences in labour market flexibility. To study this possible relationship we investigated whether or not there are structural differences in job mobility between these countries. Furthermore we wanted to investigate structural differences between the European countries, the USA and Japan. It is well known that job mobility is high in the USA and low in Japan, but it is not clear whether job mobility in the USA is structurally higher than in some European countries or Japanese job mobility is structurally lower than in other European countries.

To study international differences in job mobility between the Netherlands, the United Kingdom, France, Sweden, the United States and Japan, we used information about job to job changes derived from labour force surveys for some countries and information about quit rates derived from establishment surveys for others. For Sweden and Japan we used information from both sources. We performed a pooled cross-section time series analysis to separate cyclical fluctuations in job mobility from structural differences. International differences in job mobility corrected for cyclical variations are considered to be the structural differences.

This article is set up as follows: section 2 contains some theory on job mobility and a brief survey of empirical studies on job mobility using aggregate data; section 3 is about labour market flows and the different ways in which these flows are measured and in section 4 the labour market performance of the 6 countries is compared. The results of a cross country analysis of job mobility are presented in section 5, and section 6 concludes.

2. Empirical Studies on Job Mobility

There is a variety of theoretical models explaining the phenomenon of job mobility. We restrict ourselves to elements of two broad families of theoretical models: search models and human capital models. From

a search-theoretic point of view the probability of a worker changing jobs is equal to the product of three probabilities: that the worker is searching for another job, that he finds a job offer and the probability that he accepts the offer. Changing jobs involves costs, benefits and risks. Workers who are risk averse stay on their job when unemployment is high. Furthermore, if unemployment is high or demand is low workers search less and find less job offers because they compete with the unemployed. Job search theory predicts an inverse relation between unemployment and job mobility and a positive relation between labour demand and job mobility. If the benefits of changing jobs are high, workers have an incentive to change jobs, therefore wage differentials may be important. The human capital theory predicts that the longer people stay in a job, the larger will be the specific human capital they acquire and the greater the loss of human capital if they change jobs. The longer people are on a job, the less motives they have to change jobs with different employers.

Empirical research confirms the predictions mentioned above. According to Hall (1982) most job changes occur in the first few years after a job begins, because the worker or the employer or both perceive that the worker and the job are poorly matched: After this period of job shopping reaches a successful conclusion, workers have very low probabilities of losing or leaving jobs. Job shopping appears to be most intense when workers are in their early twenties, eventually most workers settle into near-life-time jobs. Using information on US job tenure data and retention probabilities, Hall calculates that almost 30% of US jobs has an eventual tenure of more than 20 years. Main (1982) using UK tenure data and retention probabilities, calculates an average completed length of jobs held in 1968 of 20 years. According to Main this suggests that the burden of unemployment falls predominantly on one section of the labour force which experiences either very long spells of unemployment or frequent repeated spells.

Some studies on labour mobility are based on micro-data, others on aggregate data. Studies on micro-data are usually restricted to cross-section analysis of labour force surveys. Studies on aggregate data use both cross-section and time series data, usually from establishment surveys. As our study focuses on international aggregated data, we restrict ourselves mainly to empirical analyses of mobility data at national or industry level. This survey does not claim to be complete, but gives some examples of such studies using various data sources from different countries. Table 1 summarises the studies discussed here.

Table 1. Analysis of Labour Mobility on Aggregate or Industry Level

Author	Data	Dependent variable	Relevant explanatory variables
Parsons (1977) [a]	Cross section	Quit rates	Income (−) Brief tenure (−) Females (+)
	Time series	Quit rates	Unemploym (−) Vacancies (+)
	Time series	Layoff-rate	Unemployment (+)
Corpeleijn (1980)	Netherlands industries cross-section	Quit rates	Age (−)Lay-offs (+) Firm size (−) Irregular working hours (+)
Holmlund (1984)	Sweden, time series	Quit rates	Vacancies (+) Unemploym (−) Lagged new hires (+)
Wickens (1978)	UK, time series	Separation rates	Vacancies (+) Engagements (+)
McGormick (1988)	UK, time series	Separation rates	Unemployment (−) Engagements (+)
Burgess (1989)	UK time series, cross-section	Separation rates	Vacancies / unemployment ratio (+), age (−) skill variables (−)

[a] Survey of 5 earlier studies.

Since we are studying job mobility in the seventies and eighties, a good starting point to review empirical studies is the survey-article of Parsons (1977), who disinguishes cross-sectional and time series analysis of labour mobility. In cross-sectional studies structural differences between industries, for example, can be important, while time series analysis may reveal dynamic adjustment aspects. According to Parsons cross section analysis focuses on quit rates at aggregate or industry level. The most important findings of the five industry cross-section studies reviewed by Parsons are: a negative influence of average income on industry-level, a positive influence of the fraction of workers with brief tenure and a positive influence of the fraction of females. Mobility differs with gender. Men quit because of economic reasons, women quit because of personal or family reasons. Turnover of females appears to be more strongly influenced by wage changes than that of men, which is comparable to differences in labour supply between men and women.

To a large extent the time series analysis also uses data on quits. According to Parsons quits appear to be strongly related to business con-

ditions, whereas the effects of relative wages is less clear. In the analyses indicators for business conditions are unemployment and vacancies. It appears that the negative influence of the unemployment-rate is less than the positive influence of the number of vacancies. Lay-off behaviour of employers is studied less frequently. There is a positive effect of unemployment-rates: firms are more willing to lay off workers when jobs are scarce. Parsons emphasises that layoffs rise sharply in years of recession while quits fall, and conversely in periods of prosperity and tight labour markets.

Corpeleijn (1980) uses data on 44 industries from the Dutch labour force survey of 1977. Industry quit rates are negative correlated with the average age of the workers and average firm size. There appears to be a positive influence of layoff-rates and the percentage of workers having irregular working hours.

On the basis of an aggregate time series analysis of Swedish data, Holmlund (1984) concludes that fluctuations in quit rates are mainly influenced by unemployment rate, vacancy rate and lagged new hires rate. The latter is a proxy for the number of workers with a short job tenure whose probability of leaving jobs at short notice is higher than average. Holmlund found no influence of a dummy for government-policy, a trend for omitted variables and an unexpected wage inflation variable.

Wickens (1978), McGormick (1988) and Burgess (1989) analyse separation rates for British manufacturing. Wickens finds vacancies and lagged engagements to be important and lagged average wage to be unimportant in explaining the separation rates. McGormick found a significant effect of unemployment and engagements, but no significant effect of vacancies, lagged engagements, lagged average real wage and the fraction of service-employment. Burgess analyses time series of 4, and a cross-section of all British industries and concludes that separation rates depend strongly on the state of demand in the labour market: a high vacancy/unemployment ratio raises separation rates. From the cross-section study it appears that skill variables and age are the most important variables, while there is no significant effect of average plant size on separation rates. According to Burgess, the secular decline in British separation rates is due almost entirely to the worsened state of British demand, which caused a decline in quit rates.

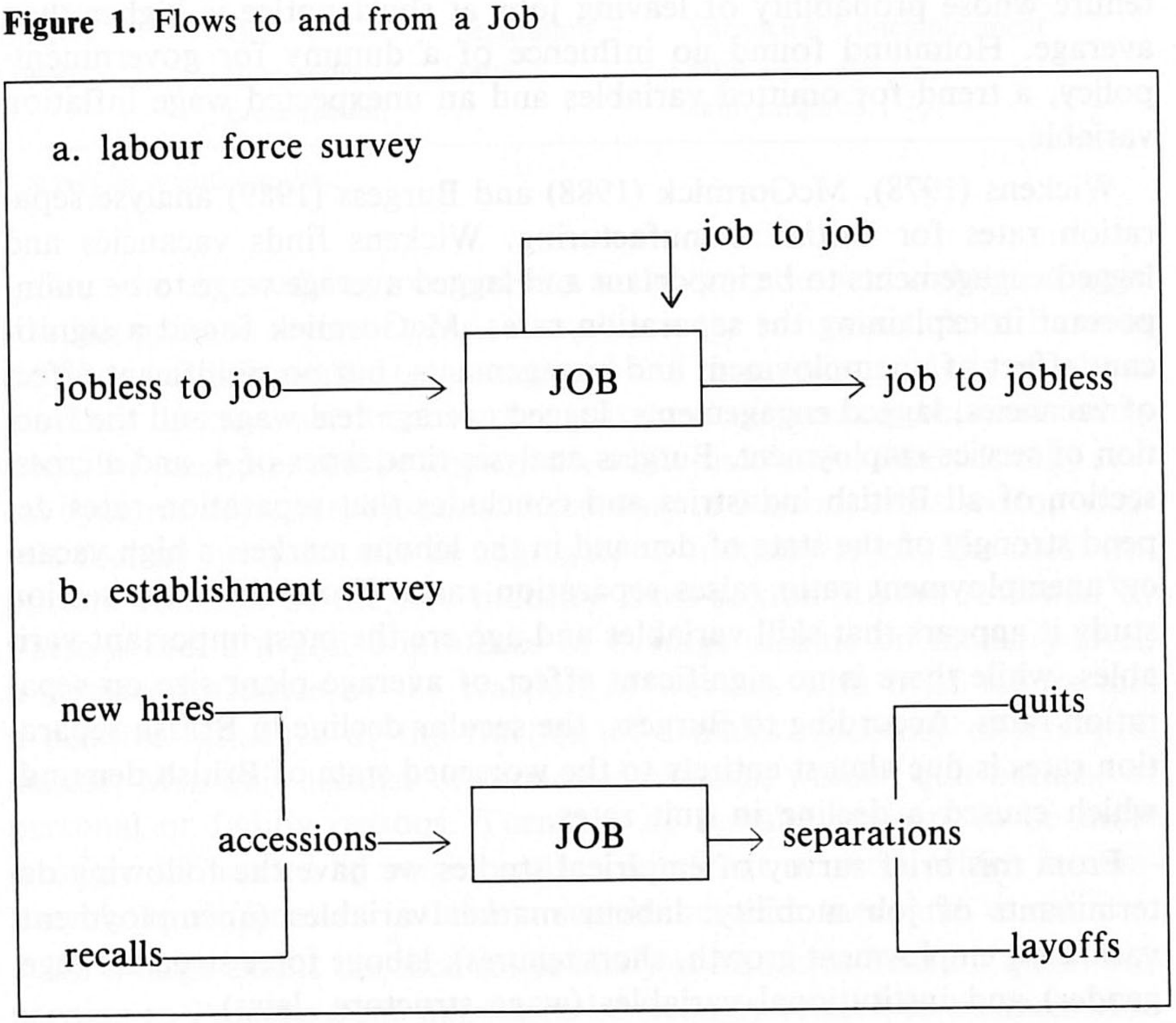
From this brief survey of empirical studies we have the following determinants of job mobility: labour market variables (unemployment, vacancies, employment growth, short tenures), labour force structure (age, gender) and institutional variables (wage structure, laws).

In empirical labour market research made so far, not much attention has been given to international comparisons of job mobility, mostly because of the lack of adequate data. The determinants of international differences in job mobility appear to be the same as the determinants on a national level: cyclical or labour market variables and structural differences due to for example policy-variables or income differentials (OECD, 1986).

3. Measuring Labour Market Flows

Job mobility refers to the movement of people between jobs with different employers. There are two different ways to measure job mobility. The first is by using a labour force survey to ask workers about their present and former labour market status, the second is by using

Figure 1. Flows to and from a Job



an establishment survey to ask employers about the numbers of workers entering and leaving the firm in a period of time. We will discuss both measures successively.

Figure 1 shows the three flows which are usually measured by the labour force surveys: flows from jobless (unemployed or non-participating) to job, job to job and job to jobless. Our main interest lies in the flow from job to job. Figure 1b. shows what is measured in establishment surveys: flows to and from a job, or in other words hirings and separations. The separations can be divided into non-voluntary and voluntary separations or quits.

Asking Workers: Labour Force Survey

Job mobility is usually measured in labour force-surveys [2] by asking workers retrospective questions about their labour market history and sometimes by using panel information. There are two types of retrospective questions. The first type asks the worker about his (or her) labour market status one year before the survey. If that status differs from the present, then that status has changed during the year. Because only one situation per year and one situation the next year are recorded, no multiple changes are registered nor is there information about, for example, intervening periods of unemployment. The second type of retrospective questions asks the worker about all the changes in his labour market status during the year preceding the survey. In this case multiple changes in labour market status may be recorded, depending on the specific formulation of the questions.

Another way of collecting information about job mobility is by using panel information. In a panel, a group of the same persons is questioned at different points in time. Without retrospective questions the researcher can establish whether or not the labour market status of a person has changed between the two points in time. Again no information is gathered on multiple job changes or intervening periods of unemployment. Usually only a part of the group questioned at time t-1 is questioned again at time t.

Job to job mobility as measured in labour force surveys is thus an indicator of actual job mobility with some inaccuracies, because it usually refers to changes between two points in time with no information on intervening changes in labour market status (see Table 2 for a summary representation). We will therefore distinguish the indicator "job to job mobility" from actual "job mobility". Job to job mobility will usually underestimate actual job mobility.

Table 2. Job Mobility Indicators

Survey type	Indicator	Measure	Incomplete measure because:
Labour force survey	Job to job mobility	Jobs with different employers at two points in time	No information on multiple changes No information on intervening periods of unemployment
Establishment survey	Quits	Number of workers leaving the firm voluntarily	Quitting into unemployment or non-participation also included

Asking Employers: Establishment Surveys

Labour turnover as a flow indicator of labour mobility is measured by questioning employers in establishment surveys [3]. In these surveys entries and exits are recorded. Separations are usually subdivided in employee initiated quits and employer initiated layoffs. By definition total separations are equal to the sum of flows from job to job and job to jobless, while total accessions are equal to the sum of flows from job to job and jobless to job. Also by definition, employment growth is equal to total accessions minus total separations. In the statistics of countries with access and separation data, this equality however does not hold, due to the fact that they are collected in different ways (Flaim and Hogue, 1985 and Holmlund, 1984).

Data on access and separations do not contain information about the origin or destination of mobile persons. So it is not possible to derive direct data on job mobility from them. The number of quits can be used as an indicator of job mobility, which is an incomplete measure of actual job mobility because they also contain quits into unemployment and quits into non-participation. Quit rates will usually overestimate actual job mobility.

4. Differences in Labour Market Performance

4.1. Employment Growth, Unemployment and Job Vacancies

The labour market performance of the countries studied here is illustrated in Table 3 using different indicators. The growth of (civilian)

employment in the period 1970-1985 is the first indicator. It shows that in the USA employment growth with an average of 2.6% per year is by far the strongest, followed by Japan with an average of 0.9% per year. In Sweden and the Netherlands the average growth-rate was about 0.6% per year, while in France and the UK there was on average hardly any employment growth or even a small decline.

Though unemployment and vacancy-rates may have changed substantially in the seventies and eighties, for reasons of simplicity we show in Table 3 only the rates of 1985. Unemployment-rates are high in the UK, Netherlands and France with some 10-11%, medium in the USA with some 7-9% and low in Sweden and Japan with some 2-3%. The share of long-term unemployed is by far the greatest in the Netherlands, where almost 60% of the unemployed has a spell of more than 1 year. In Sweden and the USA this share is about 10%. In Sweden and the USA the average unemployment spell lasts 15 weeks, in the Netherlands this is 1 year. Not only unemployment durations last longer in the Netherlands, vacancies also last substantially longer. An average vacancy lasts 2.8 weeks in Sweden and 6.0 weeks in the Netherlands. In every country for which we were able to find data, job vacancies are below 1%, with the highest percentage of 0.8 in Sweden.

In most countries the basis of the regular information about job vacancies is that on notified vacancies from the public employment service, where the employer has the option of using the public employment

Table 3. General Labour Market Information (1985)

	Employment gr [a]	**Unemployment** [b]			**Vacancies** [c]	
	%/year	**%**	**du**	**lt**	**%**	**du**
Netherlands	0.7	10.6	52	57	0.5	6.0
UK	−0.1	11.2	—	46	0.7	—
France	0.2	10.2	—	43	0.2	—
Sweden	0.6	2.8	15	11	0.8	2.8
USA	2.6	7.1	16	12	—	—
Japan	0.9	2.6	—	15	—	—

[a] Average growth of civilian employment 1970-1985 in %/year; source: OECD Labour Force Statistics.

[b] % = unemployment rate; du = unemployment duration in weeks; lt = % of male unemployment lasting longer than 1 year; source: OECD Labour Force Statistics.

[c] % = vacancy rate; du = vacancy duration in weeks; source: EC Labour Force Statistics.

Table 4. Mobility Information 1985 (*% of employees*)[a)]

Labour force survey	**Job-job**	**From job**	**To job**
Netherlands	5.0	13.3	11.6
UK	9	20.5	16.7
France	10.4	18.5	18.5
Sweden	12.2	—	—
Japan	6.0	13.7	12.2
Establishment survey [b)]	**Quits**	**Acc.**	**Sep.**
UK	—	20.2	22.8
Sweden	19.2	—	—
USA	24.3	47.7	48.2
Japan	9.6	14.5	13.6

a) See Appendix 2 for information on the data used.

b) Data refer to manufacturing, USA data are from 1979.

service or not. This implies that notified vacancies form only a part of the actual number of vacancies. Overall in the UK it is estimated that about one third of all vacancies are notified to local employment offices, in France this is 20% and in Germany 27% (Walsh, 1982). Because of these differences we do not in our analysis use vacancy percentages as explanatory variables which represent the states of the labour market. For this, we use unemployment rates and growth rates of employment as indicators. The first is expected to have a negative, the second a positive influence on job mobility.

4.2. Job Mobility

Different countries have different ways to collect data on labour mobility. Sometimes a regular survey lasts for many years. In other cases only now and then information is gathered or published[4].

In order to get a first glimpse of international differences in job mobility, we have combined information from various sources in Table 4. Most information represents the situation measured by 1985 surveys. Of course, in comparing mobility data from different countries in the same year, we have to realise that the states of the labour markets may differ in many respects: unemployment, employment growth etc. .

It appears that comparison of information from different sources of the same country is possible for the UK, Sweden and Japan. We will discuss the figures in Table 4 first by type of information and then make an overall comparison between the countries.

Job to job mobility is highest in Sweden with 12%, somewhat lower in France and the UK with 9-10% and lowest in Japan and the Netherlands with 5-6%. The flows from jobless to job and from job to jobless is largest for the United Kingdom. In France these flows are somewhat lower while the average flows of the Netherlands and Japan do not differ substantially.

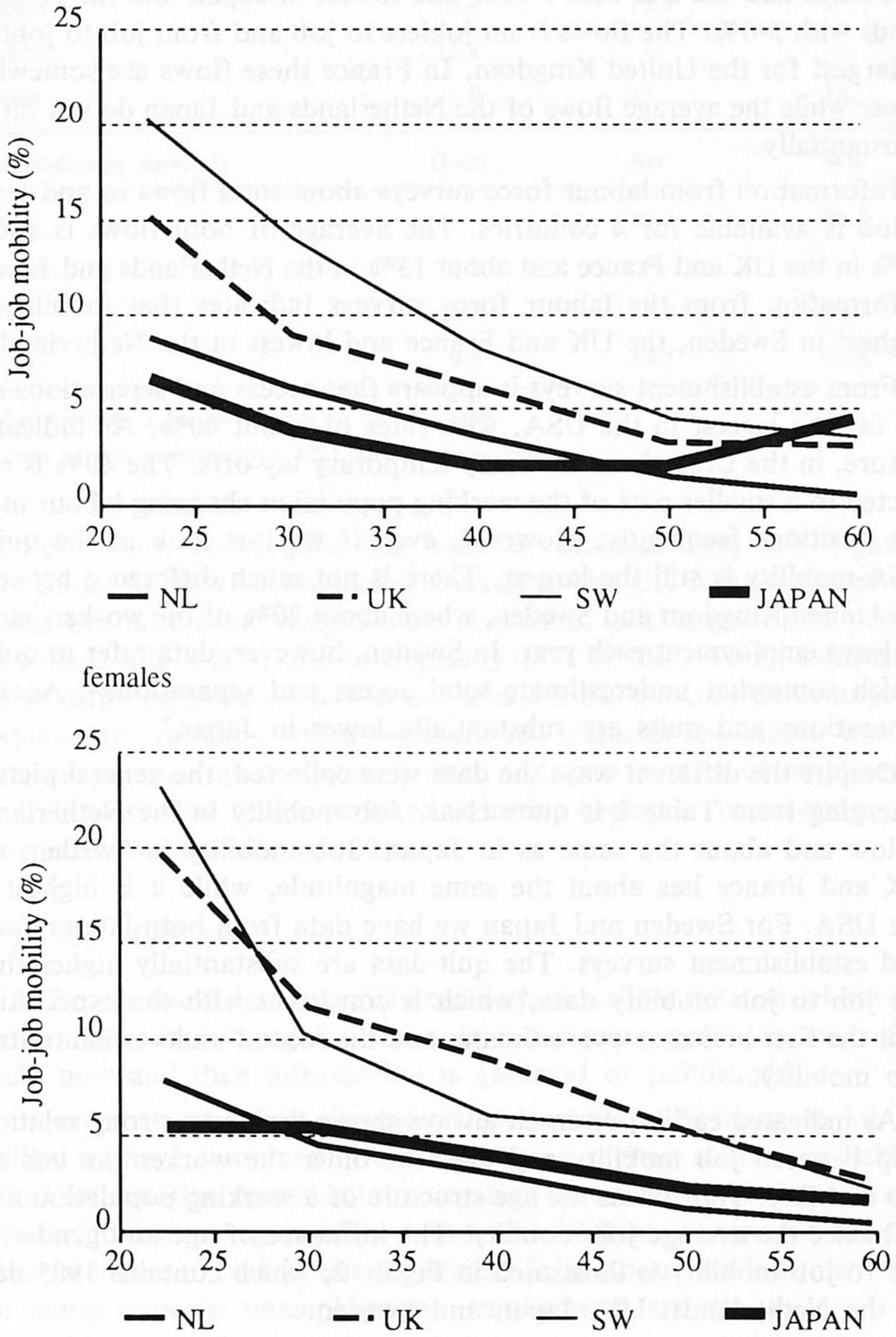
Information from labour force surveys about total flows to and from a job is available for 4 countries. The average of both flows is about 18% in the UK and France and about 13% in the Netherlands and Japan. Information from the labour force surveys indicates that mobility is highest in Sweden, the UK and France and lowest in the Netherlands.

From establishment surveys it appears that access and separations are by far the largest in the USA, with rates of about 40%. As indicated before, in the USA there are many temporary lay-offs. The 40% is restricted to a smaller part of the working population changing labour market positions frequently. However, even if we just look at the quits, USA-mobility is still the largest. There is not much difference between the United Kingdom and Sweden, where about 20% of the workers enter or leave employment each year. In Sweden, however, data refer to quits, which somewhat underestimate total access and separations [5]. Access, separations and quits are substantially lower in Japan.

Despite the different ways the data were collected, the general picture emerging from Table 2 is quite clear. Job mobility in the Netherlands is low and about the same as in Japan. Job mobility in Sweden, the UK and France has about the same magnitude, while it is highest in the USA. For Sweden and Japan we have data from both labour force and establishment surveys. The quit-data are substantially higher than the job to job mobility data, which is consistent with the expectation that the first indicator overestimates and the second underestimates true job mobility.

As indicated earlier, research always shows there is a strong relationship between job mobility and age: the older the worker the less the job mobility. This means the age structure of a working population may influence the average job mobility. The influence of age and gender on job to job mobility is illustrated in Figure 2, which contains 1985 data of the Netherlands, UK, Japan and Sweden.

Figure 2. Job Mobility by Age and Gender, Netherlands, Sweden, Japan and UK, 1985



It follows from this figure that for both sexes age is negatively correlated with job to job mobility. For men job to job mobility in almost every age-group is the largest in Sweden, followed by the UK, Netherlands and Japan. For the old-age groups Japanese men are an exception to the age-mobility structure: Japanese men aged 55-64 years have a greater job to job mobility than Japanese men aged 45-54 years. This phenomenon is probably due to the pension-schemes in Japan which force workers to be mobile at a high age. For women the differences in job to job mobility are small in Sweden and the UK on the one hand, and the Netherlands and Japan on the other hand. Young Dutch women show a greater job to job mobility than young Japanese women; at a higher age Japanese women are more mobile.

5. An Empirical Cross-Country Analysis

5.1. Analysing International Differences

In this study we analyse mobility using information on different flows: flows from job to job as derived from labour force surveys, and quits as derived from establishment surveys. Our intention is to establish to what extent differences in job mobility between countries are structural.

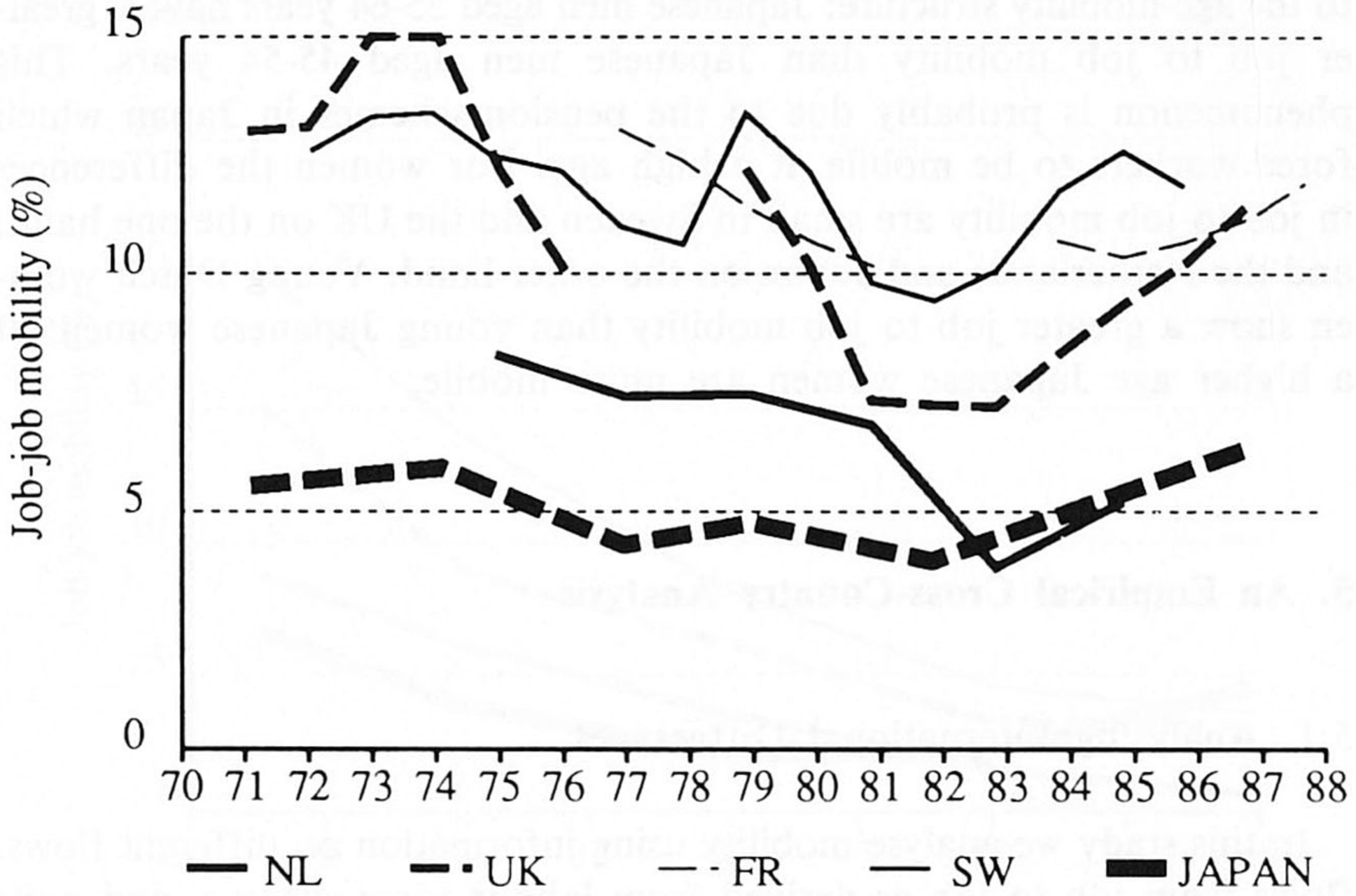
It is hard to quantify structural differences between countries. Structure do not vary much over time, so we are restricted to cross-section analysis. Analysing the *nature* of structural difference quantitatively would require a large cross-section sample which we do not have. We therefore used dummy variables to analyse the possible existence of structural differences [6].

We used a logit transformation of job mobility and estimated equations specified as:

$$\log\ (jm_{it}/(100-jm_{it})) = \beta_{oi} + \beta_1 \cdot u_{it} + \beta_2 \cdot \Delta e_{it} \qquad [1]$$

in which: jm = job mobility, either job-job mobility or quit rate
u = unemployment rate (%)
Δe = employment growth rate (%/year)
t = year
i = country
β_{oi} = country specific dummy variables

Figure 3. Job Mobility in the Netherlands, France, UK, Japan and Sweden *(% of employees)*



We estimated equation [1] using information on different flows: flows from job to job as derived from labour force surveys and quits as derived from establishment surveys. We will discuss the estimation results separately.

5.2. Job to Job Mobility

The developments in job to job mobility in the five countries of which we have data is shown in Figure 3. Everywhere in the seventies and especially in the beginning of the eighties, job mobility declined followed by an increase later on.

It appears that there are no big differences in job mobility between France, the UK and Sweden, while job mobility in the Netherlands and Japan is substantially lower than in the other countries.

The estimation results of equation [1] with respect to job to job mobility are shown in Table 5. From the first column of this table it appears that job to job mobility is negatively influenced by the unemploy-

Table 5. Estimation Results

	Job-job mobility				Quit rates	
Constant	−2.34	(28.1)	−2.37	(27.9)	−0.85	(10.7)
dummy-UK	0.57	(8.6)	0.62	(9.7)	—	
dummy-France	0.64	(9.3)				
dummy-Sweden	0.38	(5.0)	0.39	(5.0)	—	
dummy-Japan	−0.62	(7.0)	−0.61	(6.6)	−0.96	(22.1)
dummy-USA	—		—		0.89	(6.9)
u	−0.055	(7.3)	−0.052	(6.8)	−0.22	(8.2)
Δe	0.063	(4.0)	0.067	(4.2)	0.053	(3.1)
R^2	0.88		0.87		0.95	
ssr	0.803 [a)]		0.875		0.414 [b)]	

Reference country: job-job mobility: The Netherlands; quit rates: Sweden
Between parenthesis: t-values of regression coefficients, R^2 correlation coefficient corrected for degrees of freedom; ssr = sum of squared residuals

a) Allowing for country-specific coefficients of the unemployment and employment variables results in ssr = 0.535; F-statistic comparing both estimates = 1.54 (critical value: 2.18)

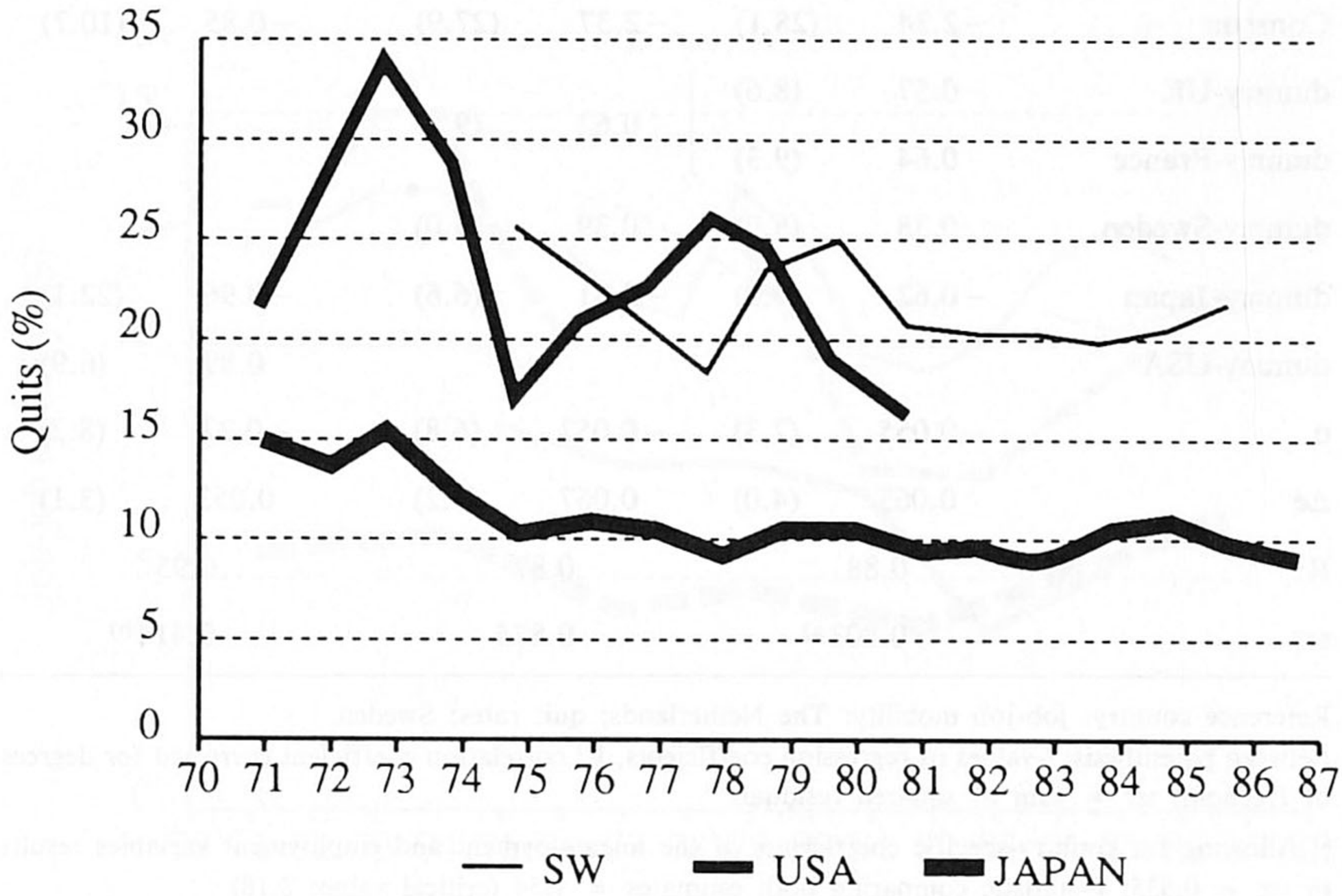
b) Allowing for country-specific coefficients of the unemployment and employment variables results in ssr = 0.282; F-statistic comparing both estimates = 2.47 (critical value: 2.52).

ment rate and positively by the employment growth-rate. We tested whether or not the coefficients of both variables differed significantly between the countries. An F-test showed that allowing for different coefficients did not improve the estimation results significantly. Apparently, changes in the unemployment and employment growth rates yield identical mobility effects across the countries investigated.

On average an incrase of 1% in the unemployment rate results in a decrease of job to job mobility of 0.5%, while an increase in the employment growth-rate of 1% leads to an increase in job to job mobility of 0.6%. The decline in the seventies and early eighties of job to job mobility and the increase later on is obviously due to cyclical fluctuations.

The coefficients of the dummy variables indicate that job to job mobility is significantly higher in the UK, Sweden and France than in the Netherlands. Job to job mobility in Japan appears to be significantly lower than in the Netherlands. Column 2 of Table 5 shows the estimation results after imposing a restriction of equality on the dummy coeffi-

Figure 4. Quits for the US, Sweden and Japan *(% of employees; manufacturing)*



cients for the UK and France. An F-test using the sums of squared residuals for the restricted and unrestricted estimate showed that the hypothesis that these coefficients have the same value cannot be rejected. Therefore we conclude that there are no structural differences in job mobility between the UK and France.

5.3. Quits

Quit rates in manufacturing industries as measured in establishment surveys are available for Sweden, the USA and Japan. Figure 4 shows that there is an overall decline in quits in the seventies and early eighties and a small increase later on.

Quit rates in the USA and Sweden do not differ very much, while those in Japan are substantially lower.

The estimation results in Table 5 show that employment growth rates have a positive influence on quits, while unemployment rates have a negative influence. Labour market influence is thus according to our expectations. Again between the 3 countries there appeared to be no significant differences in the coefficients of the labour market variables.

The size of the effect on quits of the employment growth rate is comparable to the effect on job to job mobility. Unemployment-rates have a substantially larger effect on quits than on job to job mobility. This may be due to the effect of unemployment on quits into unemployment: with higher unemployment not only job to job changes but also voluntary job to unemployment changes are reduced.

The coefficients of the dummy-variables indicate that quits are highest in the USA, followed by quits in Swedish manufacturing, while quit rates in Japanese manufacturing are lowest.

It appears that in the USA even in the beginning of the seventies this rate was about 5%, substantially higher than in the other countries. To correct for this phenomenon we also estimated equation [9] using unemployment rate less 3% as explanatory variable for the USA. In this estimate the USA-dummy was small but still significant, so we conclude that there are structural differences in quit rates between the USA and Sweden.

6. Conclusions

In this study we analysed international differences in job mobility. Our main object was to separate cyclical effects from structural differences. To analyse international job mobility we used information from labour force surveys from which we derived information about changes from job to job, and establishment surveys for information on quit rates. Job to job mobility underestimates actual job mobility because no multiple changes within a year are recorded, quit rates overestimate actual job mobility because quits are not only changes from job to job but also from job to unemployment or from job to non-participation.

We performed an empirical cross-country analysis, from which it appears that job mobility is positively correlated with growth rates of employment and negatively correlated with unemployment rates. Workers are obviously risk averse. These estimation results confirm estimation results based on national data from different countries. A striking result is that the coefficients of the labour market variables do not differ significantly between countries: workers do not differ in their reaction to cyclical changes.

Another striking result of this international comparative study refers to the structural differences. There are only small structural differences in job to job mobility between Sweden, the UK and France, and small

Table 6. Calculated Structural Differences in Job Mobility[a)]

	Job-job mobility	Quit rate
USA		25
France	15	
UK	14	
Sweden	12	22
The Netherlands	8	
Japan	5	12

[a)] Calculations are based on the estimation results of Tables 5, e = 1%/year, u = 2% except for the USA u = 5%.

structural differences in quit rates between Sweden and the USA. Therefore we conclude that there are hardly any structural differences in job mobility between Sweden, the USA, France and the UK. Job mobility in the Netherlands is structurally lower than in these countries, though higher than in Japan. Table 6 shows the calculated values of job to job mobility and quits when labour market conditions in the different countries are on their average value.

Table 6 shows the calculated values of job to job mobility and quits when labour market conditions in the different countries are comparably tight. The calculations are based on the assumption of a 1% annual employment growth and an unemployment rate of 2%, except for the USA where we assumed a 5% unemployment rate. It appears that in this tight labour market the average job-job mobility in Sweden, France and the UK is about 12-15% and quit rates in Sweden and the USA are about 22-25%. Though we have no information on job-job mobility in the USA and quit rates in the UK or France, we assume that they also have approximately the values mentioned. Since job-job mobility underestimates actual job mobility and quit rates overestimate actual job mobility, actual job mobility in these countries will range from 12-25%. Average job-job mobility in a tight Dutch labour market is about 8% and in Japan about 5%, where quit rates are about 12%. Like in other countries in Japan quit rates are about twice the size of job-job mobility.

There are probably institutional reasons for the low job mobility in Japan, where there is a lifetime employment tradition in large enterprises. Temporary workers provide the employment flexibility in Japan which the lifetime employment system cannot provide. It is not clear why Dutch job mobility is so low. Wage structure, tax burden and

institutional arrangements may explain differences between the USA and the Netherlands, but do not explain differences between for example the Netherlands and Sweden. Perhaps differences in job mobility between the Netherlands and other Euopean countries are nothing more than a typical feature of the Dutch labour market, in which long term relations between employer and employee are highly valued, and changing jobs frequently is not.

The phenomenon that there seems to be hardly any structural difference in job mobility between Sweden, the UK, the USA and France is remarkable, because there are many institutional differences between these countries. We expect for example employment protection by restrictive firing rules to reduce job mobility because workers have less incentives to search for other jobs. In the USA firing practices are not regulated by public law, but by collective bargaining. In Europe these practices are regulated by law (Emerson, 1988). Also wage differentials are large in the USA and small in European countries, especially in Sweden. There are also institutional differences between European countries, but all in all they do not seem to affect job mobility substantially.

As shown there are substantial differences in labour market performance between European countries. Unemployment is high in, for example, the UK, France and low in Sweden. One of the causes of these differences may be differences in labour market flexibility. While there are differences in labour market performance between Sweden on the one hand and the UK and France on the other hand, there appear to be no structural differences in job mobility. From this we conclude that although job mobility may be an indicator of labour market flexibility, the influence of job mobility on labour market performance can be questioned.

Notes

[1] Workers can be mobile in different ways. They can change jobs with different employers, change geographically within or across national boundaries or change occupation. We call these changes job mobility, geographical mobility and occupational mobility respectively. All changes refer to external mobility, distinguished from internal labour mobility which involves job changes with the same employer. We restrict ourselves in this paper to job mobility, although job mobility at the individual level may be accompanied by other types of changes.

[2] Or in household surveys but we will consider these to be the same as labour force surveys with respect to the information gathered on job mobility.

[3] Data on job tenure are obtained by asking employees how long they have been at their current job. Tenure data give information about incomplete job durations, while

information about completed spells is usually calculated on the basis of incomplete spells and retention probabilities. Job tenure data, however, have a major disadvantage. They provide point-in-time information as a result of employment inflow and outflow during many earlier years. A large percentage of short tenure jobs may indicate a high job mobility, it may however also indicate a rapid growth of employment with many persons on relatively new jobs. Job tenure data are a frozen representation of labour market history and give some information about job mobility, but maybe not the most relevant.

[4] Appendix 2 contains an overview of job mobility-information of the period 1970-1988 we were able to collect for the countries of our study. We restricted ourselves to information provided on a regular basis. We did not use information on, for example, unpublished monthly gross flow data of the American labour market based on the Current Population Survey, because these measurements have proven to be very difficult. See: Flaim and Hogue, 1985.

[5] According to Holmlund (1984) less than 10% of the Swedish separations are layoffs.

[6] These dummy-variables will ultimately also reflect differences in data collection and definitions between countries.

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Appendix 1. Data Used in the Analysis

General Data:

u = unemployment as percentage of total labour force
e = employment of wage earners and salaried employees
Δe = growth of employment of wage earners and salaried employees (%/year)

Sources u and e: OECD Labour Force Statistics

Job to job mobility in percentages is usually calculated using information on numbers of people changing jobs as measured in the country-surveys and information on the total employment of wage earners and salaried employees from OECD statistics (e).

Mobility Data the Netherlands

The source of information on *job to job mobility* in numbers of persons is the Labour force survey (*Arbeidskrachtentelling*) of the Central Bureau of Statistics. Information on job to job mobility is based on questions about the labour market status one year before the survey. The surveys are from the months March-May of 1975, 1977, 1979, 1981, 1983, 1985.

Mobility Data UK

The source of information on *job to job mobility* in percentages of employees is the General Household Survey. The relevant question is: "How many new employers have you started work for in the last 12 months?" We excluded multiple changes within one year. Published data are from 1971-1976 and 1979-1987.

The *access and separation rates* (% of employees) are based on "labour turnover in manufacturing industries" statistics which are published quarterly in the *Employment Gazette*: The figures relate to manual workers in manufacturing industries and are based on the results of quarterly sample surveys carried out at establishment level. Published data are from 1970-1988.

Mobility Data France

The source of information on *job to job mobility* in numbers of persons is the Labour force survey (Enquête sur l'Emploi) which is held in March every year. Job to job mobility data are published for the

years 1977-1981 and 1984-1988. There is a difference between the data from these two periods. For the period 1984-1988 it is possible to make a distinction between workers who changed sector without changing establishment (''personnes classées dans un autre secteur mais dans le même établissement''), for the period 1977-1981 this is not possible. To make the data from both periods comparable we multiplied the data from 1977-1981 with a correction-factor of 0.81.

Mobility Data Sweden

The source of information on *job to job mobility* in numbers of persons is the Labour Force Survey taken every February. The relevant questions are about the attachment to the major employers: which was your major employer during the year? Did you work in this firm all of your employment weeks during the year? These questions permit the identification of individuals changing employers at least once during the year. The published data used are from 1972-1986.

The *new hires and quit rates* are gathered on a monthly basis and refer to staff fluctuations in mining, quarrying and manufacturing. The figures do not include changes of establishment within the same enterprise. The data used in the analysis are from the period 1975-1986.

Mobility Data USA

Labour turnover data refer to the gross movement of wage and salary workers into and out of employment status with respect to individual establishments during the month. The turnover data refer to both white and blue collar workers, but relate only to the manufacturing industries. The collection of turnover data stopped in 1981. The data used in the analysis are from the period 1971-1981.

Mobility Data Japan

The source of information on *job to job mobility* in numbers of persons is the Employment Status Survey. The data refer to working persons who changed jobs between the date of the survey and one year before that. The surveys are held in the July-months of 1971, 1974, 1977 and the October-months of 1979, 1982, 1987.

The source of information on *access and separation data* is the Survey on Employment Trend. Data on labour mobility are collected from all industries except agriculture, forestry and fisheries, government, domestic services, educational services and services by foreign governments and international agencies in Japan. The data used in the analysis

refer to the manufacturing industries over the period 1971-1987. Data on quits over this period were calculated using information concerning the % of workers who separated on "one's own convenience".

Table A1 contains a summary of the available information.

Table A1. Information about Job Mobility on a Regular Basis

	Labour force survey				Establishment survey			
	Period	**Freq.**	**Qst** [a]	**Typ** [b]	**Period**	**Fr** [c]	**Pop** [d]	**Quits**
Netherlands	75-85	2y	rl	LFE	—	—	—	—
UK	71-87	y	r2	GHS	70-88	q	man	no
France	77-88	y	p	LF	—	—	—	—
Sweden	72-86	y	rl	L	75-86	m	man	yes
USA	—	—	—	—	71-81	m	man	yes
Japan	71-87	i [e]	rl	ESS	71-87	½y	man/t	yes

[a] Type of question: rl = retrospective two points in time.
r2 = retrospective including multiple.
p = panelwise.

[b] LFE: Labour Force Survey under auspices of the EC, once every 2 years, from 1984 every year, LF = Labour Force Survey, GHS = General Household Survey, ESS = Employment Status Survey.

[c] Frequency, q = quarterly, m = monthly; Japanese survey on Employment Trend is conducted twice a year.

[d] Population of establishment survey: man = manufacturing, t = total economy.

[e] Irregular.